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# ROCKS and MINERALS

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42 A Magazine for Mineralogists,  
Geologists and Collectors



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Official Journal of the Rocks and Minerals Association

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SEPTEMBER, 1942

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Vol. 17, No. 9

25c

Whole No. 134

# THE ROCKS AND MINERALS ASSOCIATION

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Organized in 1928 for the increase and dissemination of mineralogic knowledge

To stimulate public interest in geology and mineralogy and to endeavor to have courses in these subjects introduced in the curricula of the public school systems; to revive a general interest in minerals and mineral collecting; to instruct beginners as to how a collection can be made and cared for; to keep an accurate and permanent record of all mineral localities and minerals found there and to print same for distribution; to encourage the search for new minerals that have not yet been discovered; and to endeavor to secure the practical conservation of mineral localities and unusual rock formations.

Ever since its foundation in 1928, the Rocks and Minerals Association has done much to promote the interest in mineralogy. It has sponsored outings, expeditions, formations of mineralogical clubs and the printing of many articles that have been a distinct contribution to mineralogy.

Those of our readers who are members of the Association can rightly feel that they too were sponsors of these many achievements that have helped to give mineralogy a national recognition. Among your friends there must be many who would like to have a part in the Association's work—to share with you the personal satisfaction, the pleasure, and the benefits of membership. Will you give your friends this opportunity to join the Association by nominating them for membership?

Each new member helps to extend the

Association's activities—helps to make your magazine larger, better, and more interesting, and above all assists in the dissemination of mineralogical knowledge.

**Some advantages of memberships:** All members in good standing receive:

(1) **Rocks and Minerals**, a monthly magazine. (2) A member's identification card that secures the privileges of many mines, quarries, clubs, societies, museums, libraries. (3) The right to participate in outings and meetings arranged by the Association. (4) the right to display a certificate of membership and to place after their names a designation indicating their membership or to advertise membership on stationery, etc. (5) The distinction and the endorsement which comes from membership in the world's largest mineralogical society.

Mineralogical clubs which subscribe for **Rocks and Minerals** also become affiliated members of the Rocks and Minerals Association and enjoy all the advantages which such an affiliation affords.

A number of clubs hold membership in the Association, participate in the annual outings, and co-operate in many ways in furthering the aims and ambitions of the Association.

Affiliation with the world's largest mineralogical society cannot fail to increase membership, enlarge circles of acquaintanceship, and stimulate a keener interest in mineralogy.

A list of affiliated clubs will be found among the back pages of the magazine.

# ROCKS and MINERALS

PUBLISHED  
MONTHLY



Edited and Published by  
PETER ZODAC

September  
1942

## Contents for September, 1942

CHIPS FROM THE QUARRY .....	306
AFTER ALL THESE YEARS. <i>By Horace W. Slocum</i> .....	307
ROCKS AND MINERALS FREE SAMPLES FUND .....	310
MINERAL ODDITIES .....	310
GEM HUNTING IN WESTERN NORTH CAROLINA. <i>By B. M. Brehm</i> .....	311
SEA DREDGING ON DRY LAND. <i>By Carrie B. Williams</i> .....	314
ARGOS, GREECE, NOTED FOR JASPER .....	315
IRON IN NEW JERSEY. <i>By Chas. F. Diegnan</i> .....	316
JASPILITE DEPOSIT IN VERMONT. <i>By H. L. Chandler</i> .....	317
AGATE FIRST FOUND IN SICILY .....	317
AN INTERESTING MINERAL TRIP IN SOUTHWESTERN OHIO. <i>By R. Knille and J. Gibbs</i> .....	318
AN INTERESTING GEODE FROM DESOLATION ISLAND .....	320
STONE OUTPUT IN CALIFORNIA IN 1941 .....	321
GIRL INJURED AT MINE HILL, CONN. ....	321
CHICAGO UNDERLAID BY DOLOMITE .....	321
CLUBS AFFILIATED WITH THE R. & M. A. ....	322
ROCK CRYSTAL IS ABUNDANT .....	323
V FOR VICTORY AGATE .....	323
COLLECTORS' TALES (I lose "face"). <i>By P. Zodac</i> .....	324
WITH OUR DEALERS .....	324
COLLECTORS' KINKS (Mailing fragile specimens) .....	325
GEOLOGICAL LIBRARY PURCHASED .....	325
INDEX TO ADVERTISERS .....	336

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ROCKS and MINERALS

PEEKSKILL, N. Y., U. S. A.

The official Journal of the Rocks and Minerals Association

## Chips from the Quarry

### DO IT IN THE RIGHT WAY!

Ever since ROCKS AND MINERALS was first issued and up to the present day, we have received and are continuing to receive inquiries regarding a book on mineralogy for beginners in which all the common minerals appear in color. Beginners want such a book so that they can go out in the field and identify minerals by means of the colored pictures.

Unfortunately there is no such book although many minerals have been printed in color. Even if there were such a book an amateur would still have great difficulty in indentifying minerals—minerals are not identified by color alone.

We have tried and tried to inform amateurs that the color of a mineral is no definite indication of its identity. True a few minerals can be identified by their color but it takes one with some experience to do this.

Most of our common minerals are identified by their physical properties such as color and streak, crystal form, cleavage, feel, fracture, hardness, luster, odor, structure, specific gravity, taste, transparency, tenacity, etc. It is not necessary to test all these properties as often two, three or four of them will identify a mineral.

Amateurs, if you want to learn mineralogy, do it in the right way. Obtain at least 25 different, accurately labelled specimens of the common minerals, borrow a good book on mineralogy from your public library, read up on your minerals and then—go out into the field to do your identification. You will have something a thousand times better than



colored pictures—you have the actual minerals with which to compare your "finds." The color, streak, hardness, odor, feel, specific gravity—examine them first in your labelled specimens and then determine them in your "finds." Without a doubt some of those specimens collected will be identical with those in the labelled collection.

These 25 minerals can be obtained for as low as 10c each—sometimes even less—and when obtained from one of our dealers they will be correctly labelled. The book of course will cost you nothing as it is to be borrowed. For the small sum of \$2 or \$3 one can have lots of fun in studying the minerals of his neighborhood.

*Peter Zodac*

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## AFTER ALL THESE YEARS

By HORACE W. SLOCUM

For nearly sixty years the broken halves of the geodes sparkled in the sun that every morning poured into the curio cabinet. There, surrounded by fan coral, bits of obsidian, arrow heads and Minnie balls from many an unknown battle field, along with all the odds and ends accumulated by a sea-faring and pioneer peoples, they caught and threw back into the pleasant room the morning suns of over half a century.

Every week they were dusted and put back, each in its proper place in the cabinet. Each just another curiosity among odd and fantastic bits of Nature from the ends of the Earth.

It remained for the coming of the ten year old boy to change all this. He was fascinated with the Indian basket which, when it was shaken, rattled and buzzed like a desert snake. The Abalone shells caught his eye with their rich iridescent colors. But the geodes were his prize. About these he pestered his grandmother with all the questions he could find to ask. What are these grandma? Did they grow this way, Where did they come from? How did you get them? The persistent childish questions of a youngster who knew somehow that these things especially interested him.

That he received answers to these questions must be a fact accepted without a doubt. But those answers given so many years ago have, with one exception, long been erased from his memory. For he never forgot that the geodes were brought back by his Great Uncle Barker upon his return from the California gold fields where he had gone in '49. It is easy to

account for the boy's remembering this much of the geodes' history. Because not long after his discovery of these pretty stones in the curio cabinet he made another find which brought him still closer to his gold-seeking Great Uncle. Under a pile of odds and ends in Grandmother's cellar came forth a flask of powder and lead shot along with a silver mounted and engraved Colt 31 cal., Forty Niner model cap and ball pistol. Due to the fact that the pistol was fully loaded, albeit minus caps, his mother, much to his disgust, immediately relieved him of this treasure. Just the same the memory of those Quartz filled half geodes never left him, and as he grew into his teens and even into his early twenties the boy was always and forever breaking open round stones to see if they, like the geodes, contained a shimmering lining of six-sided crystals.

Thus they remained just pretty curious stones for over eighteen years longer. All thru that time the love of pretty stones and rocks never left the boy and he would carry home with him many of those which caught his eye, and read about them what he could find to read, but never with an understanding of how they should be collected, what to keep or how to label them. Hours he spent poking around an old abandoned Talc quarry in Vermont, and many a trip was made to the Pyrite vein he found high up in the hills near the bed of a brook.

So finally came the time when in his early thirties, encouraged by a friend, he really began to collect, and with the friend's help began to know what to look

for and how to study and label his finds in a systematic manner. He remembered of course his first discovery, the half round crystal filled stones in the curio case. But now by reading and observation of other collections he, for the first time, knew them to be Geodes. And he found, too, that this particular type of geode came from only one place in the whole country—the area around Hamilton, Ill.—Keokuk, Iowa. These were the labels they bore and it puzzled him to know how they were found and whether they were now to be obtained at this late date. He longed to go out there to the Middle West from his home in New England and with his own hands to collect and open some of these fascinating round rocks. However it was so far, and business kept him so close to home that he had to put these thoughts aside with his other wishful fancies. When opportunity presented itself for a short trip, he would go to Ruggles Mountain in Grafton, N. H., to look for Beryl or Albite crystals, (the new workings where Autunite and Gummite are now found were not opened then). Or he went over to Topsham, Me., to hunt for the sea-green Beryls and Columbite crystals which occur there, or to Windham, Me., for Staurolite crystals. Always short trips that would take no longer than a week end. Still the sight of the two half-geodes, which by now were added to his collection, always set him to musing about the place of their origin.

The years slipping by brought new additions to his collection tho few beyond the borders of the New England Pegmatites. Always he would read and wonder about other famous localities and wistfully put aside the thoughts of ever collecting at these places.

Suddenly, when he was nearly forty years of age, came the work with the Government. Now he must travel and spend weeks and even months in many places thruout the Eastern United States. Now his horizons were lifted and his collection grew by leaps and bounds. Mineral Hill just west of Media, Penna., yielded Amazonite and Deweylite. Blue Hill Schoolhouse nearby, worked out as

it was in '37, produced one fine cluster of the green Quartz crystals. Upper New York, aside from the two weeks vacation he took there, could easily be reached from Utica where he worked six weeks. Week ends thruout all that time were spent locating Danburite in South Russell, N. Y., or collecting Chondrodite from Rossie, Spinel from the same place, and bright sky-blue Spinel from Natural Bridge. Amelia Courthouse, Va., of which he had read so often, produced Microlite and blue Albite along with fine green Amazonite. North and South Carolina rewarded him with a long list of fine minerals which he had never expected to see in his collection.

Then came the assignment to Illinois. It was discouraging from a collector's standpoint. Winter just at hand and no place to collect. Hamilton a long week end away and he dared not go so far for fear he'd be snowed in and be unable to get back to his work on time. The winter dragged slowly, lightened only by a few trips to the Field Museum in nearby Chicago. These only increased his impatience for the time to come when he might safely take the road to Hamilton, some 300 miles away.

Spring came slowly that year, and with it the opportunity that he had looked forward to thru so many cold snowy months. One bright warm sunny afternoon, when his work had been finished for the week, he finally found himself driving westward toward the little town of Hamilton where nearly a century ago his ancestor must have collected the geode which found its final resting place in that well remembered cabinet.

The details of the ride were better left unwritten. Passing thru the flat uninteresting cornfields of the Illinois prairies, he came next morning into the town. The country about being strange to him, he enquired at a filling station and was given the disheartening news that geodes were now scarce. Still he was told of a brook from the banks and bed of which many of the good specimens had come in the past and with not too high hopes he set out for the stream. It was not far out of town, about a quarter mile south



to be exact. Evidences of other collectors were strewn all about. Smashed pieces, dirt filled and battered, they could be found all along the small creek. Up and down stream he ranged but only one good specimen he found. This one with only a small portion of its circumference showing, was dug out of a cut bank. And this one, because he knew not the technique of opening geodes, was smashed into a dozen fragments. It was discouraging. So gathering up the pieces along with a few odds and ends of broken geodes gathered from the brook bed, the man climbed over the bank and started for the road.

Now where he came up over the bank and just beyond were located several gasoline storage tanks. In building the foundation for these tanks it had been necessary to blast down into solid ledge for pieces of this limestone lay scattered around the base of each tank. The man noticed the one nearest him as he pulled himself over the steep slope. It was roughly rectangular in shape, about 5-6 feet long by 4 feet wide and perhaps a foot in thickness. In the edge nearest the brook there appeared a bulge or great nodule which would be all of 8 inches in diameter.

Here above all things was a geode in place. Quite a curiosity thought the man and he called his wife's attention to it and started to deliver a lecture on the theory of how geodes were formed and how they weathered out of the ledges and were found in the soil and brook beds. In all probability the man's wife had heard this lecture at least a dozen times before. So she was bored with all this discourse and tired of slipping and sliding around thru a nasty slippery brook bed all for a few fragments of silly old rock, so midway thru the lecture she up with her hammer and hit the embedded geode a lusty smack!!!!

It was the one blow in ten thousand! For the nine thousand nine hundred and ninety nine others would have crushed its paper-thin shell to as many pieces. This stroke, however, neatly lifted a circular piece which would be no more than three inches in diameter, from the top of the



*The author displaying a choice geode which he found near Hamilton, Ill. Note the broken geodes on the ground in front of him.*

geode. At this moment the man looked into the geode and gave a shout. For the interior was a tangled mass of Calcite crystals. Not the dog toothed variety either, but wedge-shaped ones (see Dana's Textbook Fig. 767) The largest crystal lay across the axis of the geode and was fully three inches on a side. The others were tumbled and arranged around it in a profusion. Nothing the man had ever seen, even in museums, had ever equaled this. It was an entirely new specimen to him.

Hurrying to the car after his chisels he spent a laborious half hour patiently chipping the embedded geode from the ledge in which it was firmly fastened. This was a prize and it was carefully wrapped and safely packed away.

Still prize or no prize this was only one geode and the man wanted more. Wanted several for his own collection and a few to give to his friends. So he again took the road in a southerly direction with the hope that he might find another stream which would produce better results than the first one. In less than

three miles he found it. This time the stream did not cross the road but paralleled it a short distance to the right. There were broken geodes in the stream bed. And there were whole ones, too. Bushels of them! And plenty to be dug from the banks. Some were solid, some were partly filled with Quartz crystals, and the lighter ones were covered on the inside of their shells with a frosting of sparkling crystals.

An hour? Two? The man lost all track of time while the pile of specimens beside his car increased as each new find was added. Finally hunger and fatigue called a halt. There were enough specimens collected to supply his friends and many with which to make exchanges.

And as he sat resting and smoking with the warm spring sun on his shoulders the man wondered if it were at this same brook or one like it in the near vicinity that his Great Uncle had stopped so long ago. Perhaps stopped to drink the cool water and had seen as he stooped the glittering geode in the stream. So many conjectures were possible. The man wondered about it all for some time, and then, rather sadly, started the long drive home. He'd never know the answers to his questions. No one alive now to tell him. He shrugged. Well anyway his boyhood ambition had been fulfilled and he had acquired some fine specimens in the bargain. Wasn't that enough for any collector? He decided it was.

### Rocks and Minerals Free Samples Fund

Founded to cover cost of free copies of the magazine to be distributed during the New Jersey Mineral Show to be held later in the year.

### Contributions Received From

Rocks and Minerals .....	\$10
John Albanese, Newark, N. J. ....	\$10
Miss Violet Miller, Brooklyn, N. Y. \$ 2	
Miss Evelyn Waite, Crestwood, N. Y. ....	\$ 1
Mark M. Foster, Denio, Ore. ....	\$ 2
Anonymous, Hartford, Conn. ....	\$ 2
Total .....	\$27

### MINERAL ODDITIES

After many days of careful examination of Dana's *System of Mineralogy*, 6th edition, and its three appendices, it has been read through and the localities indexed. The following countries have received the most listings (one listing only noted for each mineral).

	System	1st	2nd	3rd	Total
U. S. ....	1718	188	267	227	2400
Germany ..	562	79	99	92	832
Italy .....	285	48	159	116	608
Great Britain & Ireland	393	16	34	24	467
Russia & Siberia ....	220	24	61	92	397
Sweden ....	241	54	34	33	362
Austria ....	221	20	40	46	327
France .....	199	23	43	50	315
Norway ....	178	14	22	44	258
Bohemia ..	155	15	55	27	252
Canada ....	126	54	45	24	249
Hungary ..	164	12	32	34	242
Switzerland	97	13	40	21	171
Mexico ....	99	12	19	33	163
Australia ..	59	15	66	21	161



## GEM HUNTING IN WESTERN NORTH CAROLINA

By B. M. BREHM

990 Dana N.E., Warren, O.

My first trip to North Carolina in 1941 was to look for gem material and to make acquaintance there. I succeeded in making some good friends but didn't do too well in finding anything that was worthy—trading was the best way to get material; buying from those who had is the next; finding your own is the hardest, slowest and most discouraging. To prove my point go with me to North Carolina again this year, 1942, in the month of June:

My son, Donald, 14, and I left Warren early Sunday morning of June 14th. We had our noon lunch at Charleston, W. Va., at the same restaurant as a year ago. (You get to find and remember the good places). Continuing we arrived at Twin Oaks, N. C., in time for our evening meal with Mr. and Mrs. Erwin who run the hotel and cabins at this road junction. The year before Mr. Erwin had told me of an eccentric old man who had a collection of stones that he had picked up around there. I gave it little thought then, but being that the man had died in the interim and the stones were for sale by the heirs, Mr. Erwin offered to look up the heirs if I would stop on the way back to see them. I did just that—but I'll tell the rest in its proper place.

On to our destination Statesville, which we reached early the next morning where we found our good friend and fellow rock hound busy cleaning out a stove pipe. Our hosts, Mr. and Mrs. Walden, bade us make ourselves to home which we did in a jiffy and proceeded to talk and look at minerals. He had a nice bunch that he had recently dug up and I was in my glory in just looking at them and hearing him tell of the digging. By them I mean amethysts—single crystals and groups. The largest specimen was 10 x 9 x 4 inches in size and contained over 50 crystals.

Nothing to do but get out there and dig as fast as I could get going. But after working in an open field in the boiling hot sun for several hours and no

stones showing, it took all the starch out of me for the afternoon. We'd try again in a day or two as soon as the water would leave the hole, we hoped, and give us better going.

### Tues., June 16th

Tuesday morning we traveled to northern Iredell County, in the neighborhood of Harmony, to see some nice smoky quartz crystals Mr. Walden had wind of. Arriving there we did see the crystals and I, of course, had to buy them from the farmer. We then walked over the man's farm in search of more crystals and the best we did was to locate the very spot where the ones I had just purchased came from—the owner of the property did not know they came from his place. They had been found by his hired man and sold to him as coming from Alexander County. We were soon told we could not do any digging on the place. This was our first setback. You have to dig nowadays in North Carolina as all the surface material has been well gathered and your only hope of finding anything is after a hard rain on newly plowed ground.

The rest of the day we spent looking over various other fields in the vicinity. At one place we found a number of small rutile needles—more could be had if one were to dig.

Wednesday was just another day—no luck in finding a thing worthy of the effort.

### Thurs., June 18th

Thursday was the day!

Back at Mr. Walden's hole in the field on the little knoll we found that the water was as we had left it. We busied ourselves in cleaning the banks and the settlements out of the hole. Mr. Walden then cleaned out the larger flints (massive quartz) and told me to get in. I did. Shoes and all, right into 14 inches of water and mud! Pawing with my hands at the bottom of the hole I felt the faces of an amethyst crystal. Excited? And how!

For two hours I squatted in that water digging with my fingers and pocket knife. On the bank besides me a collection of very lovely amethysts was soon laid out and increased the longer I dug. Very nice single crystals and two large beautiful groups, fragments, and also some milky quartz crystals came out. Some of the large pieces of massive quartz had attached to them an amethyst among a group of small milky quartz crystals.

This locality is about 3 miles south of the business section of Statesville, Iredell Co., N. C. Not only did Mr. Walden's pit contain much water but also did the amethysts as many of the crystals had large water bubbles.

Returning to the Walden's home we spent the rest of the day cleaning our find. We had about 100 of the nicest amethysts one could hope to see at one time. May I add that this was a thrill that a rock hound lives for—happens only once in a while (if ever)—that makes the hobby such an attractive one.

### Fri., July 19th

Friday we visited the old gold mines in Catawba County near the town of Catawba. Pyrite specimens there and then proceeded to a place where Mr. Walden had at various times found some nice amethyst. We walked along a small branch for nearly a mile, getting wet and muddy and found only a handful of crystals.

Spent more time looking over a field where some nice amethysts had been found at one time and again no luck. Found out thru observation that the crystals found there must have come out of an old well. Digging would produce more, no doubt, but who will do the digging? The well is on the same road as the gold mine but 5 or 6 miles farther on.

Then we went to the famous Alexander County. It is famous all right in the books and literature but try finding anything or even try looking and see what happens in more places than one.

The colored folks told Mr. Walden that he must be finding something or he wouldn't spend his time looking in the

fields and walking in the hot sun, so consequently, they said if he wanted to do more looking he'd have to pay. It's well and good to pay if there is hope. But who wants to pay to look when he knows that the surface stuff has long since been picked up.

The old, abandoned Hiddenite mine, at Hiddenite, Alexander Co., is not worth the attention of the ordinary rock hunter any more. The place has been looked over so much that it's a waste of time even stopping. Knowing a man near there Mr. Walden took me over to see his collection. The man said he didn't have it any more, that he gave it up long ago. When I showed him some of my cut stones that I had with me, he loosened up. Brother rock hounds, he had it!! I bought from him three small pieces of the famous and almost mythical hiddenite. The color is poor but I got some hiddenite. I also bought some very nice rutile crystals (I hope they will cut into nice gems) and some nice rutiled quartz. He'd sell none of his smoky quartz crystals of which he had some very beautiful ones. He had the largest smoky quartz crystal I have seen down that way and it was cutting material mostly. And another smoky quartz crystal enclosed a rutile that was as large as a pencil. Nice to have, if you could get it.

Then we visited a Mr. Moose at Stony Point. He is doing a nice job of cutting now and has ambitions. His material was all from the standpoint of the cutting possibilities. We did some trading. I gave him what he wanted and received in exchange rutiled smoky quartz, clear rutiled quartz, agates from the Catawba River, and good cutting smoky quartz that was nearly coal black.

The last trip near Statesville was for sunstone. We had no trouble in procuring all we wanted, tho it was of very pale "sparkle" and poor color. The locality is about 7 miles northeast of Statesville, on Route 64, off to the left of the road about a mile in a gully in a mosquito-infested woods (the only mosquitoes that we encountered on our trip). Unfortunately the sunstone is of poor grade.

### Sun., June 21st

We took leave of the Waldens Sunday morning and traveled to Spruce Pine. Our friend of last year, a Mr. Green, was ready to go, along with a Mr. Wilson. We went to the McKinny Mine for hyalite opal. Our luck was of the best and we took all we wanted, leaving some for others. This is excellent material of blue, white and yellow. The white fluoresces a bright green.

Monday we visited a Mr. Young, a collector in a small way. Went again to see Dr. Roberston's collection at Burnsville. Procured some golden beryl from the caretaker of the Ray Mine near there. The aquamarine seen from this mine was very poor and so was the white beryl.

Visited the home of the Mr. Wilson mentioned above and there I saw my first moonstone and gemmy epidote. The moonstone is very nice and has a good chatoyancy and free enough of flaws to make a gem almost equal to the Ceylon material. I mean that! I have finished one small stone from this lot that is a gem of merit, considering everything. The epidote is gemmy to the ninth degree. He had a nice lot of doubly terminated crystals and singly terminated ones. He had a lot of other mineral specimens as well as an Indian relic collection of merit.

To wind up a nice friendly stay in North Carolina, we visited Johnson's Minerals at Asheville. Mr. Johnson is too generous. I could buy nothing! He loaded me down with such "mere trifles" as star rose and clear quartz, moss agate and other hard-to-get North Carolina material. I in turn unloaded to his delightful daughter, Miss Joyce, some material for her to try cutting. I hope she keeps up her good work in the cutting line—she has made a fine start.

At Spruce Pine the antique and mineral collection of Attorney McBee is well worth the time to look at. Mr. Green, at the Motor Service Center, has a mighty fine start in North Carolina minerals and cut stones.

Then back to Twin Oaks to see the stones of the heirs. They were clear and smoky quartz crystals and portions

of quartz. One weighed 350 lbs., another about 50. I bought six pieces of nice large quartz that will do for cutting and will also probably make several nice large spheres.

The trip was profitable for amethyst and hyalite but nothing else unless you count the buying as profitable. Well, maybe, it is if you consider that you might not have had anything if you did not purchase. The trading of material is one of the best ways to get along on a trip. So when you go, take along with you something that may be of interest to the rock hounds in the locality where you are going. Stop in and get acquainted with the dealers along the way—they are grand folks and always ready to talk minerals.

Summary of the trip include the following materials obtained: Hyalite, autunite for fluorescence; amethyst, golden beryl, smoky quartz, clear quartz, epidote, moonstone, sunstone, moss agate, agate from Catawba River, rutile, rutilated smoky quartz, rutilated clear quartz, star rose quartz, star milky quartz for cutting; corundum balls, skeleton agate, pyrite, garnets, etc., for the specimen case.

The mineral sections of North Carolina are not too scattered. Most of the western counties of the state produce a large amount of minerals and gem stones. Spruce Pine is the center of the mineral country and one will do well to make that his headquarters and work out from there. Statesville is also a good common center to work from. On the first trip we found Franklin as the best location to work from in the southwestern portion of the state. The Franklin region is noted for its garnet, corundum and amethyst.

Get acquainted as you go along—one rock hound will lead you to the next. Then, first thing you know, you'll have more names than time will permit. Don't destroy any good will among the folks by not asking their permission to look. Don't get in the way around the quarries and be sure you have permission before looking. In this way you'll save yourself a lot of trouble and make it easier for the next rock hound who likes to get out once in a while, too.

## SEA DREDGING ON DRY LAND

By **CARRIE B. WILLIAMS**

Clarksville, Ohio

Southwestern Ohio is famous the world over as one of the richest collecting grounds for fossils of the Richmond series of the Cincinnati strata. Dr. E. O. Ulrich, formerly Chief Geologist of the Federal Survey and Dr. R. S. Bassler, head of the Geological Department of the National Museum, and many other noted geologists have found some of their best specimens in these fossiliferous rocks.

For several years past, Dr. Kenneth E. Caster, Assistant Professor of Geology at the University of Cincinnati, has conducted evening Lecture-Discussion groups and personally led fossil-hunting field expeditions in these parts. He refers to these excursions as sea dredging on dry land, for geologists concede that the area was a shallow arm of a sea which covered the region in early geologic time, and much evidence exists to confirm this opinion: rocks deeply ripple-marked, "tidal channels," layers of shells lying edgewise as if washed up by the waves, as well as the general marine character of all the fossils.

The most recent of these journeys was to the Clarksville, Ohio, locality, which is the source of some fine Richmond material and the type locality of many fossils. The itinerary had been arranged to include grounds showing outcrop or exposure of both Waynesville and Liberty formations of the Cincinnati strata.

Starting from the campus of the University, a group of about forty Cincinnatians followed Route No. 50 to their first stop (1), at Lick Run, where that stream crosses the highway. Descending a steep bank they came upon a fine deposit of fossils of the Mt. Auburn formation, the lowest representative of the Richmond Group. Here they found double-headed Dutchmen, the largest species of the brachiopod *Platystrophia*, and slabs of stone showing numberless forms of other shells, gastropods, cephalopods and early "moss-plants", Bryozoa. It was with reluctance that the

group turned from this rich field; but arrangements had already been made to join other members of the party at Clarksville, before noon.

The company now numbering about seventy followed highway No. 22 to a stream, Sewell Run (No. 2) east of the town and found ideal collecting conditions. The Department of Highways of Ohio had recently deepened the channel, thus exposing a deposit of blue shale in which are embedded trilobites, clams, cephalopods and many other fossils. Above this level occur fragile shells, *Dalmanella* sp. and *Plectambonites clarksvillensis*. Following in ascending sequence, *Streptelasma* or "horncoral" makes its first appearance, with a delicate encrusting species of Bryozoa, *Protarea*. A short distance up the stream is the type locality of the brachiopod *Strophomena nutans*.

Above a small waterfall, another brachiopod, *Platystrophia* (platys, wide; strophus, a band), appears—the species *clarksvillensis*, and with it entire specimens of still another shell, *Hebertella*. Pass a flood-gate, and the prized *Isotelus*, a large trilobite, and clams are present in the shale. This gives place to other deposits in which occur the cephalopod *Orthoceras* and brachiopod *Rafinesquina*. Near the top of the series *Rhynchotrema dentatum* and *Glyptorthis* sp. indicate to the observing eye of the fossil-hunter that the Waynesville fauna are giving place to forms of the Liberty formation.

Here and there are pockets of tiny shells not much larger than pinheads but showing beautiful markings when placed under a lens. Here also are specimens of the sponge-like tetracoral many of which weigh several pounds, and clusters of bryozoa in large stony masses or twig-like forms; only when sectioned and shown under a microscope can they be accurately identified.

Tramping over rocks had created an appetite which could not fail to do justice to a bountiful basket dinner served

as the foot-sore travelers ranged themselves on a sunny slope; for the day was November 2, 1941, and the wind was cold.

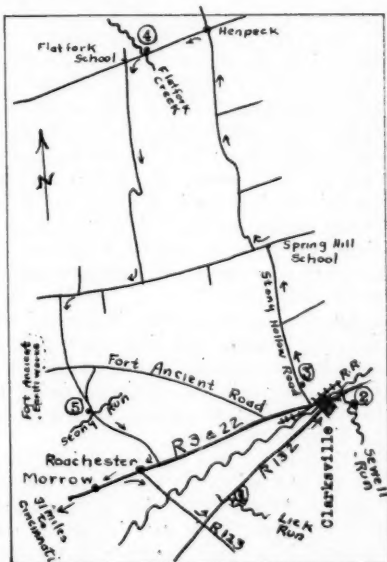
Stony Hollow (Stop No. 3) was not visited due to lack of time, and a drive of ten miles took the party to stop No. 4, Flat Fork, a well known collecting ground for fossils of the Liberty formation. High water precluded exploration of this stream, but such forms as *Rhynchotrema* (snout, beak), and *Dinorthis*, shells, and a specimen of coiled form of cephalopod were collected. The prize find, however, was a rare fossil star-fish.

Leaving this locality, the group followed a road sign "Fort Ancient Museum", and passed within sight of the ancient earthworks of the same name on the hills overlooking the valley of the Little Miami River.

The next and last stop (No. 5), was at Stony Run, not far from the walls of Fort Ancient. Fossils of the Waynesville formation, trilobites, clams and shells crowded the layers of shale in the deep ravine.

The day was drawing to a close, and the members of the party returned to their cars. In addition to the many fossils to add to their collections, they carried back to their homes in the city, branches of oak and gum with brilliant leaves; yellow-capped bittersweet from the vines; and crimson capsules of wahoo and velvety panicles from the sumac thickets.

Dr. Caster has arranged for another excursion in the near future for the purpose of collecting fossils of higher formations... He is an enthusiastic naturalist and paleontologist having been recently elected vice-president of the Institute of Paleontology of Ithaca, New York, and vice-president of the League of Ohio Naturalists.



Sketch map of the fossil areas near Clarksville, Ohio.  
(Not drawn to scale)

## ARGOS, GREECE, NOTED FOR JASPER

Argos is a little city of about 10,000 population in southeastern Greece. It is the capital of Argolis province in north-eastern Peloponnesus. The Peloponnesus is the southerly peninsular portion of the mainland of Greece and is connected with the northern portion by the narrow Isthmus of Corinth. A famous canal, the Corinth Ship Canal, has been cut through the isthmus. Argos is in the eastern part of the Peloponnesus peninsula, about 5 miles north of the sharp bend of the Gulf of Nauplia (Argolis).

Argos is surrounded by an immense plain (the name Argos signifies "plain") over which are scattered many fine pebbles and small boulders of red jasper. This jasper takes a beautiful polish and is greatly esteemed by the Greeks.

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**BUY U. S. WAR  
BONDS AND STAMPS**

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## IRON IN NEW JERSEY

By CHAS. F. DIEGNAN

Iron mining has had a very interesting history in this state and was the first important industry. To visit one of the old sites and wonder about the geological and historical past, stimulates the imagination. The specimens are not all interesting but the surrounding land formations affords sufficient material to think about.

The part of the Appalachian Mountains known as the Highlands which cross northern New Jersey, were once high mountains. Time and weathering agents have leveled them into a series of flat-topped ridges that are cut by narrow valleys. This entire region has had repeated sinkings and raisings which accounts for the various sedimentary depositions. New Jersey was once covered by an arm of a great sea which extended north from the Gulf of Mexico. The Laurentian ice sheet gave all exposed surfaces a thorough scouring, moved large rock masses, dislodged loose material and finally left a pile of debris consisting of native and foreign material known as the terminal moraine.

Historically, iron ore was taken from the ground as early as 1743 in Warren County. Another old mine at Ringwood, near the New York state boundary, was operated by a Peter Hassenclever previous to the American Revolution. All the ore from Ringwood was taken from open pits and it is probable that iron from this area went into the manufacture of cannon balls used in this war. It is a fact that war materials were made from New Jersey iron ore during the Civil War. The present war demands have again developed interest in the iron deposits and diamond drilling has shown that there are sufficient reserves to warrant further operations. At Mt. Hope, Morris County, preparations are under way to sink a shaft 2500 feet to tap the veins of magnetite. This ore is higher in iron content than the hematite such as is mined from the Mesabi Range in Minnesota.

### The Andover Mine

About a quarter mile west of Lake Lenape, near Andover, in the northwest-

ern part of the state, is one of the many abandoned iron mines in New Jersey. The dump piles show considerable evidence that either or both hematite and magnetite ores were once taken from here. The pits and holes in the hillsides are located approximately in a northeast and a southwest direction from the dumps which parallel the old road leading to the highway. In examining the hematite area, no magnetite was found and in the magnetite pit, no hematite. (The hematite of New Jersey is really limonite and occurs in irregular masses). Some of the acid igneous rock, near the hematite workings, contain scattered deposits of copper ore. It is impossible to enter the openings leading into the hematite mine because of water. It is but a short walk through a tunnel to enter the pit from which the magnetite was taken. A dipping needle carried along the base of the walls shows that more iron remains here.

The most interesting spots from which to collect are the dumps. A heavy hammer is needed to break up the material. While working on a pile farthest from the tunnel, some interesting pieces of andradite garnet were found. Much of the garnet showed magnetite and was heavy with galena. Upon examining two pieces, 2 x 3 and 3 x 3, it was seen that there were groupings of garnet crystals, about the size of a pin head to that of a pea. They are of a deep color, almost black, and probably are the melanite variety which is found in and around the Franklin area. Both these specimens are heavy with galena. Further study showed that the garnet crystals only formed when galena was present. When there was no galena, the garnet was a compact mass with more magnetite and some quartz. On the other hand, when magnetite predominated in a specimen there was usually considerable pyrite and no galena.

Two good pieces were kept, showing massive garnet with galena and garnet crystals and some magnetite. The smaller

(Continued on page 325)



## JASPILITE DEPOSIT IN VERMONT

By H. L. CHANDLER

No. Springfield, Vt.

Jaspilite, a red mineral consisting of interwoven layers or mixtures of jasper and hematite, was prospected and worked a little about 3 years ago on the Parrot farm located about 12 miles north of Burlington, Vt., on U. S. Route 7 on the road to 'the Islands' of northern Lake Champlain.

Mr. Parrot, the farm owner, was found by your observer to be a genial soul and cooperative. Several trips to the deposit were made and each time the owner was very kind. Reasonable amounts of samples were taken away in the car and Mr. Parrot even allowed us to drive the car up into the pasture near the deposit to make it easier in lugging out specimens.

The exposed bed rock, bared by erosion and glacial scraping, lies on the north of a ridge perhaps 100 feet above the dirt road running past the deposit. The writer doesn't know the exact details of its discovery or who prospected and worked it, but the exposed red patches showing on the surface rocks undoubtedly led to its discovery.

The bed rock in which the jaspilite occurs as veins and pockets of various widths, is a pink to red high silica lime-

stone, well known in this part of the Champlain Valley. This rock was once worked and polished under the name of "Red Mahogany" marble. Much of it is brecciated and it is a beautiful stone when polished.

Associated with the jaspilite, which also takes a good polish, are found small hematite crystals on the fracture planes, traces of blue and green copper minerals, probably malachite, azurite and chrysocolla. Some limonite stainings were also noted as well as massive and cleavable pure white limestone.

An interesting specimen found, which was largely hematite, had a perfect six-sided cleavage perpendicular to the basal cleavage.

The writer has never thoroughly prospected the area for other mineral associations due to the lack of time on each trip there, but undoubtedly there are many more present.

This article was written entirely from memory of the last trip there 2 years ago and is not intended to be a geological thesis. The bare facts are herein stated as we saw and remember them.

## AGATE FIRST FOUND IN SICILY

The agate is a mineral which has been known for centuries. It was first found on the island of Sicily along the banks of the Achates River from which it received its name. Sicily is a large island off the southwestern coast of Italy and belongs to Italy.

Theophrastus in his notice of the gems used for signets (31) has: "A handsome stone, too, is the Achates, brought from the river of that name (the Drillo) in Sicily, and sold at a high price."<sup>1</sup>

There seems to be some doubt as to the location of the Achates River. Theophrastus locates it as the now known Drillo while Pliny places it between the Selinunte and Sciacca. Most writers, how-

ever, favor the Drillo as the ancient Achates River.

The Drillo (also known as the Dirillo) is a small stream in dry weather but is subject to floods and so is not easily crossed after heavy rains. The river is in the southeastern part of the island, flows southwest through a sandy plain of the Val de Noto (Noto Valley), and empties into the Mediterranean Sea.

Very fine specimens of agate, chalcedony, and jasper, as waterworn pebbles and small boulders, are found along the banks of the Drillo River.

<sup>1</sup> King, C. W. *The Natural History of Gems or Decorative Stones*. London, 1867, p. 1.

## AN INTERESTING MINERAL TRIP IN SOUTHWESTERN OHIO

By R. KNILLE and J. GIBBS

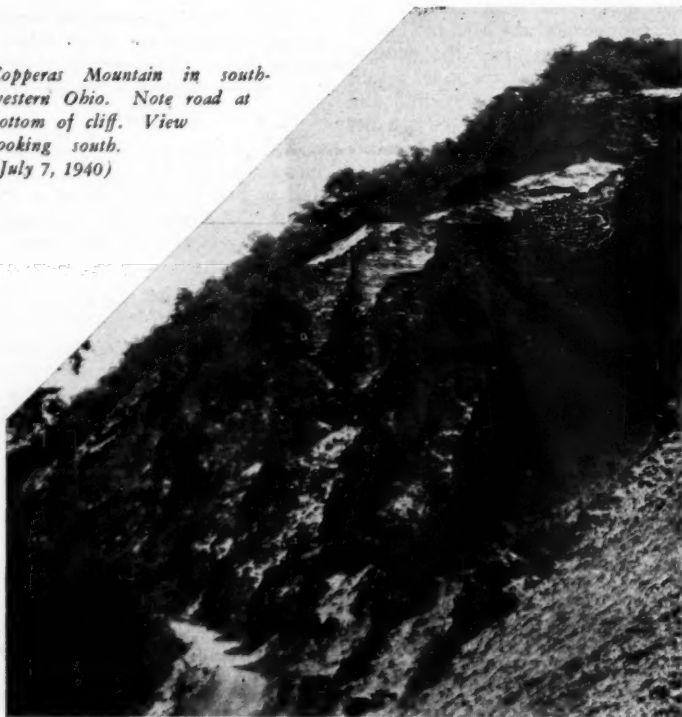
Cincinnati, Ohio

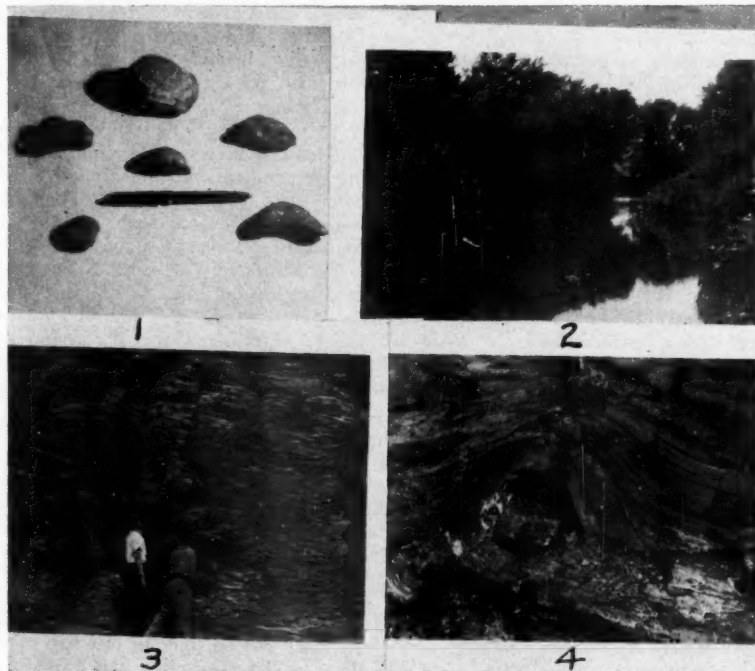
On Sunday, July 7, 1940, we, J. Gibbs, R. Knille and Mr. C. E. Knille, left Cincinnati at 5 a.m. for Copperas Mountain, a fruitful mineral locality near Bainbridge, Ohio, which, however, seems to have had little attention in the past. The cliff for which we were looking was not easily found, but after making several inquiries we finally located it. (For any persons interested in visiting the cliff, the map gives the necessary information. Seip Mound State Park, indicated on the map, will serve as a guide, for it is indicated on all road maps of Ohio, being

approximately 3.3 miles east of Bainbridge, a small city). The Cliff, 300 feet in height and 1000 feet in length, is composed of thinly stratified shale, and is very prominently marked by deep ravines. In fact, the ravines are wider than the portions of the cliff between them.

Paint Creek, which is more the size of a small river than a creek, runs parallel to the face of the cliff. Between the creek and the base of the cliff is a very narrow dirt road, about six feet above the creek. It is too narrow to allow a car to turn around, and in places a person

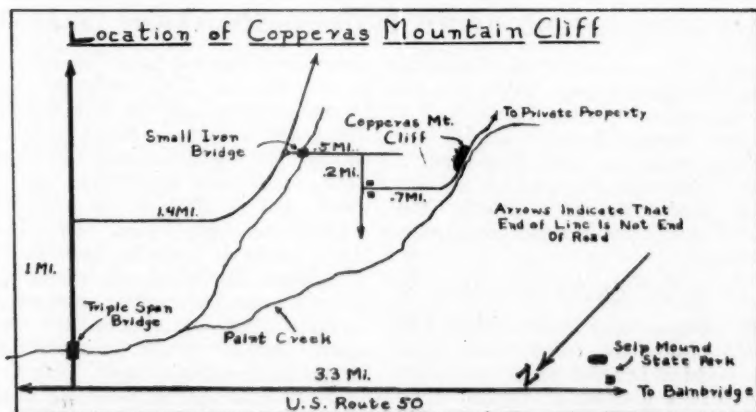
*Copperas Mountain in southwestern Ohio. Note road at bottom of cliff. View looking south.  
(July 7, 1940)*





1. Marcasite nodules from the shale of Copperas Mt. (The fountain pen is to show size of the nodules).
2. Paint Creek at the base of Copperas Mt.
3. The two authors examining a huge concretion. (R. Knille, left, and J. Gibbs, right).
4. A close-up view of the huge concretion embedded in the shale of Copperas Mt.

(Photos taken July 7, 1940)



standing on the road must squeeze himself against the cliff so that a car can pass.

In the shale of the cliff we found the soft greenish-yellow to white mineral, melanterite, also called coppereas, after which the mountain is named. Incidentally, Coppereas Mountain is mentioned in Dana's "*System of Mineralogy*" twice: in the index according to states and as a famous melanterite locality. Despite the fact that the cliff cannot be climbed to a height of more than three or four feet, because of the dangerous sliding shale, this mineral can be obtained in abundance. Also, imbedded in the shale at about a four feet level, were many marcasite nodules, an inch to an inch and a half thick and one to four inches in diameter. A few of these pieces of marcasite had smaller crystals of the same mineral on them.

A geological oddity we noticed was four or five large spherical hollow concretions, imbedded in the shale at a comparatively low level, most of which were broken open, the shells being about nine inches thick. Some of them had smaller spherical nodules inside.

After obtaining some good specimens of both marcasite and melanterite, we drove back to Seip Mound State Park and ate our dinner.

From the park we drove to the abandoned Rucker Limestone Quarry, another

mineral locality near Greenfield, Ohio, twelve miles northwest from Bainbridge. One mile before entering Greenfield, we came to a bridge over Paint Creek. A dirt road on the right, immediately before coming to the bridge, led us directly to the quarry. This quarry is roughly circular, half of the circumference being perpendicular to the ground and the other half sloping. The perpendicular walls are 200 feet high; about three-fourths of this height is above the ground level, while the rest extends down to a deep spring-fed lake, which now forms the bottom of the quarry. A large variety of minerals was not found here, but we did obtain some specimens of the most important mineral of the quarry, sphalerite, ranging from light brown to black in color. A few small quartz crystals in rock cavities and some thin sheets of asphaltum from cracks and cleavages in the limestone were also found. After securing some good specimens of sphalerite and the other minerals, we started homeward. Arriving in Cincinnati at about 6 o'clock, it was noticed that we had driven more than 200 miles during the day. The outcome of this trip pleased all of us, as specimens like those which we found are not common in this section of the state. A return trip to the two localities, in order to explore them further, has already been planned by us.

## AN INTERESTING GEODE FROM DESOLATION ISLAND

In the private office of C. A. Hartnagel, State Geologist of New York, (in the New York State Museum, Albany, N. Y.) is a most interesting quartz geode. The specimen, which is a very good one, is about 12 inches in diameter and its interior is lined with quartz crystals. The label which accompanies the geode reads as follows:

### A LITTLE CRYSTAL CAVE

"A Geode Cavity partly filled with banded chalcedony (onyx) and lined with quartz of peculiar crystal form. The cavity was a gas-hole in volcanic lavas and the deposits in it have been laid

down from hot waters which held the silica in solution. This specimen is from Desolation Island off the West Coast of Tierra Del Fuego, S. America. It was obtained by Capt. Williams of Niantic, Conn., who was shipwrecked on this rough coast in 1846."

Desolation Island (also called Desolation Land) is 70 miles long and 15 miles wide. The island, which belongs to Chile, is near the extreme southern tip of South America, and forms the southwestern boundary of the Strait of Magellan. It is of volcanic origin. The rocks of its extreme western point are known as Cape Pilaes (Pillar).

## STONE OUTPUT IN CALIFORNIA IN 1941

Under the direction of Walter W. Bradley, State Mineralogist, the following production data have been compiled on granite, marble, and sandstone, from complete returns supplied to the Statistical Section by the producers:

### 1941 Granite Output Showed An Increase Over the Previous Year

The 1941 output of granite in California had a total value of \$261,661, as compared with \$198,896 for 1940. The 1941 production included 11,915 cu. ft. of building stone, valued at \$75,364; 27,563 cu. ft. of monumental stone, valued at \$170,658; 884 linear ft. of curbing, valued at \$1,129; and 32,212 cu. ft. of unclassified material including some tuff, volcanic rock, and a small amount of mica schist, which was used as building stone and flagstone, having a value of \$14,510. The above came from 13 quarries in ten counties, three quarries of which were in San Diego County; two in Placer County; and one each in Fresno, Lassen, Los Angeles, Madera, Riverside, Sacramento, San Bernardino, and Sonoma counties. The material from Los Angeles County was a mica schist and that from Sonoma County a tuff.

### Marble

The 1941 production of marble in California was valued at \$14,448 (including some onyx and travertine from Solano County, and a small amount of limestone used as building stone and flagstone coming from a single operator each in Los Angeles and Santa Barbara counties). The marble came from a single quarry in Tuolumne county. The 1941 output showed a decrease in value from that of 1940 which was \$15,189.

### Sandstone

An unlimited amount of high-grade sandstone is available in California, but the wide use of concrete in buildings of every character, as well as the popularity of a lighter-colored building stone, has curtailed production in this branch of the mineral industry during recent years almost to the vanishing point. In 1941 there was a total of 60,958 cu. ft. of sandstone produced in California, valued at \$13,143 at the quarry. This came from two properties each in Monterey and San Luis Obispo counties and one each in Colusa, Napa, Riverside, Shasta, and Ventura counties.

### Girl Injured at Mine Hill, Conn.

Wilbur J. Elwell, a member of the Association from Danbury, Conn., sends us a clipping from a newspaper relative to a 20-year old girl who was quite badly injured when she fell into one of the old shafts at Roxbury Station, Conn.

The old siderite mine on Mine Hill, in Roxbury Station, at which the accident occurred about 2:30 p.m., August 2, 1942, has long been a noted locality for a number of interesting minerals such as galena, pyrite, quartz crystals, siderite, sphalerite, etc., and many collectors have visited it. We hope, therefore, that this unfortunate accident, which occurred to a member of a party of hikers, will not force the owners of the property, Mr. and Mrs. William G. Mathews, to bar mineral collectors from visiting the mine dumps.

### Chicago Underlaid by Dolomite

A great body of a potential ore of the strategic metal magnesium lies under Chicago, it is pointed out by Henry W. Nichols, chief curator of geology at Field Museum of Natural History, Chicago, Ill. "This city is built upon a bed of dolomite (the carbonate of lime and magnesia) which is from 200 to 450 feet thick," he says "Although this rock is mined elsewhere as a source of magnesium, such use of it here is unlikely, because large deposits are available in regions where land values are much lower. Too few analyses of the Chicago bed rock have been reported to determine its average value, five analyses made on rock from our local quarries all show a content of magnesium metal between 12 and 13 per cent, or nearly the theoretical maximum for ore of this kind."

## Clubs Affiliated With the Rocks and Minerals Association

### ARIZONA

#### Mineralogical Society of Arizona

Geo. G. McKhann, Sec., 909 E. Willetta Street, Phoenix.

Meets at the Arizona Museum in Phoenix on the 1st and 3rd Thursday of each month.

### CALIFORNIA

#### East Bay Mineral Society

Miss Nathalie Forsythe, Sec., 1719 Allston Way, Berkeley.

Meets on the 1st and 3rd Thursdays of each month (except July and August), at 8:00 p.m., in the Lincoln School Auditorium, 11th and Jackson Sts., Oakland.

#### Northern California Mineral Society, Inc.

L. M. Demrick, Sec., 424 Ellis St., San Francisco.

Meets on the 3rd Wednesday of the month at the Public Library in San Francisco.

#### Pacific Mineral Society

Mrs. Maude Oke, Sec., 9115 S. Harvard Blvd., Los Angeles.

Meets on the 2nd Friday of each month at 6:30 p.m., at the Hershey Arms Hotel, 2600 Wilshire Blvd., Los Angeles.

#### Southwest Mineralogists

Dorothy C. Craig, Corres. Sec., 4139 S. Van Ness Ave., Los Angeles.

Meets every Friday at 8:00 p.m., Harvard Playground, 6120 Denker Ave., Los Angeles.

### COLORADO

#### Canon City Geology Club

F. C. Kessler, Sec., 1020 Macon Ave., Canon City.

Meets on the 1st and 2nd Saturdays of each month at 9:00 a.m. in the High School Building, Canon City.

#### Colorado Springs Mineralogical Society

Mrs. Helen S. Caldwell, Secretary, 221 N. 14th, Colorado Springs.

Meets usually at the Lennox House, Colorado College Campus, Colorado Springs, on the 2nd Monday, of each month at 7:30 p.m.

### CONNECTICUT

#### Bridgeport Mineral Club

Miss Georgianna Seward, Sec., 2859 Main St., Bridgeport.

Meets in the Bridgeport Public Library on the 3rd Monday of the month.

#### Mineralogical Club of Hartford

Frank P. Rockwell, Secretary, 88 Fern St., Hartford

Meets the 2nd Wednesday of each month, at 8:00 p.m., at 249 High St., Hartford.

#### New Haven Mineral Club

Mrs. Lillian M. Otersen, Sec., 16 Grove Place, West Haven.

Meets on the 2nd Monday of the month at the Y. W. C. A. on Howe St., New Haven.

### IDAHO—OREGON

#### Snake River Gem Club

Mrs. A. Ingraham, Sec., Box 714, Ontario, Ore.

Meets alternately in Payette, Idaho, and Ontario, Oregon, (two small cities on the Snake River) on the 3rd Tuesday of every month.

### ILLINOIS

#### Junior Mineral League

William Dacus, Sec., Morgan Park Junior College, 2153 W. 111th St., Chicago.

### MAINE

#### Maine Mineralogical and Geological Society

Miss Jessie L. Beach, Sec., 6 Allen Avenue, Portland.

Meets last Friday of the month at 8 p.m., at the Northeastern Business College, 97 Danforth Street, Portland.

### MARYLAND

#### Natural History Society of Maryland

2103 N. Bolton Street, Baltimore.

Office hours, Tuesdays and Fridays, 10:00 a.m. to 5:00 p.m.

### MASSACHUSETTS

#### Boston Mineral Club

Mrs. Grace G. Dearborn, Sec., 40 Mt. Vernon St., Cambridge.

Meets on the 1st Tuesday of the month at 8:00 p.m., at the New England Museum of Natural History, 234 Berkeley St., Boston.

#### Connecticut Valley Mineral Club

Mary E. Flahive, Secretary, 96 South St., Florence

Meets on the 1st Tuesday of each month at 8 p. m. at various institutions in the Connecticut Valley.

### MISSOURI

#### National Geologist Club

Mrs. D. P. Stockwell, Pres., Mt. Olympus, Kimmswick.

### NEVADA

#### Reno Rocks and Minerals Study Club

Mrs. Rader L. Thompson, Sec., Box 349, R2, Reno.

Meets on the 1st Wednesday of each month, at 7:30 p.m., at the Mackay School of Mines, Reno.

#### Western Nevada Mineral Society

Miss Helen Griffing, Sec., 231 Mary St., Reno.

Meets on the 2nd Wednesday of each month at 7:30 p.m., at the State Bldg., Reno.



**NEVADA****Mineralogical Society of Southern Nevada**

Paul Mercer, Acting Secretary, Bureau of Mines, Boulder City.

Meets on the 2nd Monday of each month at Las Vegas High School and on the 4th Monday of each month at Boulder City High School—both meetings at 8:00 p.m.

**NEW JERSEY****Newark Mineralogical Society**

Louis Reamer, Secretary, 336 Elizabeth St., Orange.

Meets on the 1st Sunday of the month at 3 p.m. at Junior Hall, corner Orange and North 6th Streets, Newark.

**New Jersey Mineralogical Society**

O. B. J. Fraser, Sec.-Treas., 27 Stoneleigh Park, Westfield.

Meets on the 1st Tuesday of the month at 8 p.m. at the Plainfield Public Library.

**NEW MEXICO****New Mexico Mineral Society**

R. M. Burnet, Sec.-Treas., Carlsbad.

**Society of Archaeology, History and Art**  
Carlsbad.**NEW YORK****Chislars, The**

Miss Evelyn Waite, Sponsor, 242 Scarsdale Road, Crestwood, Tuckahoe.

**Queens Mineral Society**

Mrs. Edward J. Marcin, Sec., 46-30—190th Street, Flushing.

Meets on the 1st Thursday of the month at 8 p.m. at 8501 - 118th St., Richmond Hill.

**OKLAHOMA****Oklahoma Society of Earth Sciences**

W. P. Smiley, Sec.-Treas., 229 W. Jefferson Street, Mangum.

Meets on the 2nd Tuesday of each month, at 7:30 p.m., at the Historical Museum, Mangum.

**PENNSYLVANIA****Thomas Rock and Mineral Club**

Mrs. W. Hersey Thomas, Pres., 145 East Gorgas Lane, Mt. Airy, Philadelphia.

Meets on the 3rd Friday of each month, at 8:00 p.m., at the home of its president, Mrs. Thomas.

**VERMONT****Mineralogical Society of Springfield**

Victor T. Johnson, Sec., 11 Elm Terrace, Springfield.

Meets on the 3rd Wednesday of each month at 8:00 p.m. at the homes of members.

**WASHINGTON****Gem Collectors Club**

Mrs. Lloyd L. Roberson, Sec., 522 North 70th Street, Seattle.

Meets on the 1st and 3rd Tuesday of each month (except during the summer) at 8:00 p.m., at the Y. M. C. A.

**Washington Agate and Mineral Society**

Monroe Burnett, Sec., 802 S. Central St., Olympia.

Meets on the 1st Monday of the month, at 7:30 p.m. at the home of some member.

**WISCONSIN****Wisconsin Geological Society**

Frank H. Nelson, Sec., 740 N. Plankinton Ave., Milwaukee.

Meets on the 1st Monday of each month at 8:00 p.m., at the Public Museum in Milwaukee.

**Rock Crystal Is Abundant**

Rock crystal, the transparent variety of crystal quartz, is so abundant that tons are thrown away every year as worthless by quarriers of other minerals, according to Henry W. Nichols, chief curator of geology at Field Museum of Natural History, Chicago, Ill. Yet one variety, of such great industrial importance, that it is classed as a strategic mineral, can be found in commercial quantity only in Brazil. It is used to control the length of radio waves, and of radio frequency oscillations, wherever their accurate control is required.

**V FOR VICTORY AGATE!**

H. E. Murdock, of Bozeman, Mont., whose specialty seems to be Montana moss agate, sent in for examination a small polished thin slab of this mineral which is his prized "V for Victory" specimen. The specimen is  $1\frac{1}{2}$  inches long and 1 inch wide at its widest point. It not only has an excellent "V" in its center but it is also V-shaped. Furthermore it shows a beautiful play of iridescence when held in the bright light. This very fine and interesting specimen comes from the Yellowstone Valley of Montana.

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## Collectors' Tales

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### I LOSE "FACE"

In many of the anthracite mines of Pennsylvania, Poles, Hungarians and Slovaks are the actual miners, the Welsh are the bosses and foremen, while Italians are the rockmen who drive tunnels.

On one occasion I was invited to visit one of the miners (perhaps it was to see some minerals he had collected) when an amusing incident occurred—at least it was amusing to me though the miner may have been deeply embarrassed.

The house was quite comfortably filled with neighbors and friends who may have gathered to see the "big" mining engineer and I tried to make myself as agreeable as possible. Everything went well until the lady of the house handed me a can of prepared food requesting me to read the directions for use. All stopped talking and looked at me! I took the can, read the directions to myself, and then pondered a moment in thinking how to explain them to her. Suddenly I was rudely interrupted for into the center of the room stepped a tall, burly miner. "My Mary can read," he almost yelled, and then, "Mary!" he belatedly. In an instant a girl of about 12 appeared, the can which had been grabbed from me was thrust into her hands, and

she was told to read. The girl read the directions quite loudly, after which, with a toss of her head, she stalked majestically out of the room. All seemed to be awed by the girl's ability to read English—all but the father whose chest stuck out so far I was afraid it might break. Then I happened to glance at my friend—he seemed to be so deeply embarrassed and humiliated that for a moment I was nonplussed. Then it all gradually dawned on me. The poor, uneducated people had been watching me and because I did not read out loud, nor even moved my lips, they thought that the print was too much for me to decipher. It made little difference that neither they nor perhaps even Mary understood the words that had been read. *Mary was able to read the print and I wasn't*, was the one thought in their minds. It struck me so funny that I almost burst out laughing but refrained in respect to my friend. No doubt to this day some of them still relate how a little girl of 12, a daughter of poor, uneducated foreigners, bested a highly educated American mining engineer in reading English.

P. Zodac

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### With Our Dealers

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Benedict P. Bagrowski has moved from 1014 Vermont, Lawrence, Kansas, to 1722 S. 22nd St., Milwaukee, Wisconsin.

Harold J. Verron, Box 51, Gorham, N. H., announces the suspension of the sale of mineral specimens for at least two or three months and possibly longer. He is now devoting all his time and energy to the mining of a huge deposit of mica which he and two friends recently discovered in the town of Campton, N. H.

A new advertiser appears in this issue of ROCKS AND MINERALS—Frederick Currier, Jr., Box 605, Meredith, N. H. Mr. Currier is a

member of the Rocks and Minerals Association and from all accounts has a large stock of good minerals.

John Albanese, P. O. Box 281, Newark, N. J., has enlisted in the U. S. Navy and so his sales of minerals are suspended until after the war.

Corrine R. Saunders, of Newport News, Va., whose specialty is fossils, has her first advertisement in this issue of ROCKS AND MINERALS. The advertisement will run for one full year. She has an attractive offer for fossil collectors.

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## COLLECTORS' KINKS

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### MAILING FRAGILE SPECIMENS

Did you ever have occasion to mail a very fragile specimen to a collector in a distant city? And did it reach its destination safe and sound? It's dollars to doughnuts that it arrived damaged if not broken up entirely. Hereafter take no chances but follow one of the following methods as used by one of America's most prominent collectors, Mr. James G. Manchester, of Hampton Bays, L. I., N. Y.

#### Fragile Minerals on Matrix

Take a wooden cigar box whose sides are higher than that of the mineral. Into this box pour melted paraffine to a depth of about  $\frac{1}{2}$  inch or so (depth should be much less than the height of the matrix and can be determined by practice). Just before the paraffine sets, insert into it the specimen. Then set the box aside for a few minutes for the paraffine to harden. To mail, do not put anything in the box such as cotton or tissue paper as these are not needed. Just close the cover, tie box with string, and then wrap as an ordinary package. To extract the mineral from the paraffine, break off the sides of the box and pry up the specimen with a long knife blade. The speci-

men breaks off cleanly so that little paraffine adheres to it and that which does can be easily removed.

Fragile specimens such as natrolite on matrix can be shipped in this way and often two or more specimens can be inserted in one box if you are careful that they neither touch each other nor the sides of the box.

#### Groups of Fragile Crystals

Once Mr. Manchester had occasion to mail a large group of fragile celestite crystals to a collector in West Africa. He soaked some newspapers for three days in a pail of water until they had the consistency of pulp. Then the specimen was wrapped snugly and thickly on all sides with the wet pulp, wrapped again in thick folds of dry newspaper, and then inserted into the mailing box into which it fitted snugly. (On drying the pulp remains in place holding the crystals firmly).

It took a number of weeks for the specimen to reach its destination and when it did arrive the pulp was still wet—but not a single crystal was broken or damaged.

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### IRON IN NEW JERSEY

*(Continued from page 316)*

piece has two crystals, about  $1/16$  of an inch in size, imbedded in the galena. They are green and perhaps another variety of andradite.

During the early winter, I visited this area again and from the number of stakes driven in the ground it would seem as if surveying were being done on the property. There are very large deposits of iron within the state and with better methods of mining and milling, New Jersey may again become an important producer to compete with the mines in the South and the West.

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### Geological Library Purchased

J. S. Canner & Co., 665 Boylston St., Boston, Mass., announce the recent purchase of the major portion of the private geological library of the distinguished geologist and explorer, the late Professor Raphael A. Pumpelly. An 11 page catalog (Cat. No. 119) covering the books and publications purchased has been released. It is free for the asking.

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**BUY U. S. WAR  
BONDS AND STAMPS**

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# CLASSIFIED ADVERTISEMENTS

WORLD'S BEST WANT AD. MEDIUM FOR MINERALS

Rate 5c per word; minimum 10 words. Remittance must accompany copy in all cases. Advertisers must furnish satisfactory references before their advertisements will be inserted. Forms close the 1st of every month.

## BOOKS

**Handbook For the Amateur Lapidary** by J. H. Howard, 16 chapters covering all phases of gem cutting and polishing, 141 pp., 14 illus., price \$2.00. J. H. Howard, 504 Crescent Ave., Dept. R., Greenville, S. C.

**History and Geology of the Royal Gorge**, an illustrated souvenir booklet with maps and drawings locating 54 minerals for touring collectors. 50c postpaid. F. C. Kessler, Canon City, Colo.

**Art of Gem Cutting**—Just out. Latest and most complete book for the lapidary. \$2.00. Price list of American Gem Rough free. Sample sack 10c. Gem Exchange, Lake Bluff, Ill.

**Fluorescence of Minerals** by Chester Slawson. Excellent color plate of the Cranbrook display, plus text. 35c postpaid. Cranbrook Institute of Science, Bloomfield Hills, Michigan.

## FOSSILS

**Fossils, Minerals, Old Arms, Indian Beaded Trappings**, prehistoric specimens, general line of curios. Lists 10 cents. N. E. Carter, Elkhorn, Wisc.

## EXCHANGES

**Autunite, Boltonite, Cryophyllite, Danalite, Enstatite, Ferrisicklerite, Graftonite, Heterosite, Triphylite** and other Eastern species. Gunnar Bjareby, 147 Worthington St., Boston, Mass.

## MINERALS

**Beautiful Opals—Direct from Australia.** Lapidaries Parcel 10 ounces cutting opal (about 50 stones) \$10.00. Collectors specimens—good attractive parcels, \$5.00, \$10.00. Dozen small black opals \$5.00. 10 ounces small opal chips \$5.00. Illustrated catalogue No. 47 free. Natural History Books (thousands), lists free. Norman Seward, "Opal House," Melbourne, Australia.

**Large Dark Purple Amethyst Crystals** containing gold; bright sparkling clusters of pyrite crystals; Mt. Mica, Maine, tourmalines. 75c—\$2.00, postpaid. Rich gold specimens \$2.00 up. Monroe Mineral Store, Monroe, N. Y.

**Minerals, Fossils, Indian Relics, Books, Coins, Curios, Stamps, Old Glass.** Catalogue 5c. Indian Museum, Osborne, Kansas.

**Large Dark Purple Amethyst Crystals** containing gold. 75c to \$1.50 postpaid. Monroe Mineral Store, Monroe, N. Y.

## MINERALS

**Scott Rose Quartz Co.**—Rose Quartz, Black Hills specimens, all kinds and colors; for rock gardens, cabinets, etc. Boxes: 24 specimens, \$1.00; 18 specimens, 50c; 15 specimens, 35c. Postage paid. Box 516, Custer, S. Dak. Send stamp for price list.

**Top Quality Breccia Jasper**—Strong, clean, excellent all other Jaspers for beauty. Suitable sizes for all purposes. 40c per lb. Slabs 8c per inch. Wholesale to dealers. Leo Ferris, San Miguel, Calif.

**Uraninite** and select North Carolina specimens. Paul Silver, Genl. Supt., Feldspar Producing Co., Spruce Pine, N. C.

**Millerite, Jelinite, Oolitic Limonite, Grunerite.** Benedict P. Bagrowski, 1722 S. 22nd St., Milwaukee, Wis.

**New England Minerals for sale or exchange.** Correspondence solicited. Rudolf C. B. Bartsch, 36 Harrison St., Brookline, Mass.

**25 Beautiful Ozark Specimens**—About 5 lbs. Minerals, crystals, chalcedony, jasper, onyx and cutting materials, \$2.00 postpaid. John Jennings, Eureka Springs, Ark.

**Cutting Agates, Woods, Minerals**—Bishop's Agate Shop, North Bonneville, Wash.

**Chinese Carvings and Cabochons in Jade and other stones.** Prices reasonable. Send for price list. Chas. O. Fernquist, N. 4108 Walnut, Spokane, Washington.

## FLUORESCENT MINERALS

**Choice Fluorescent and Phosphorescent Polished Slabs** of unsurpassed beauty with cold quartz lights, 2x3 to 4x6, \$1.00 to \$6.50, depending on material. All highest quality. Cabinet specimens. Edwin Skidmore, R.F.D. 1, Box 247, Westfield, N. J.

**Fluorescent Calcite mixed with sphalerite and galena.** I have been mining specimens for ten years and this is the only calcite I have found which will fluoresce under the black bulb or quartz light and only a small quantity available. For sale or trade for good willemite or wernerite. J. A. Robertson, Box 105, Baxter Springs, Kansas.

**Fluorescent Mexican Fluorspar**—Prices on request. A. J. Wallace, 118 Lawns Avenue Collingswood, N. J.

